INKBIRD

ITC-308 WIFI

Temperature Controller Manua

Contents

Part 1 Quick Guide to Use

01 CAUTION

- KEEP CHILDREN AWAY
- TO REDUCE THE RISK OF ELECTRIC SHOCK, USE ONLY INDOORS
- RISK OF ELECTRIC SHOCK. DO NOT PLUG INTO ANOTHER RELOCATABLE POWER TAPS OR AN
- EXTENSION CORD.
  USE ONLY IN DRY LOCATION

ATTENTION:

- ELOGIGANEZ LES ENFANTS
- Pour réduire le d'électrocution,Pour Usage Ã L'Intérieur Seulement.
- Risque de choc électrique. Ne pas brancher dans une autresource de courant portative ou une rallonge.
- UTILISER UNIQUEMENT DANS DES EMPLACEMENTS SECS

02 Specification

Model: ITC-308-WIFI
Brand name: INKBIRD
Input: 120Vac 60Hz 10A/1200W MAX
Output: 120Vac 60Hz 10A/1200W (total two receptacles)
Disconnection means: Type 1B
Pollution degree: 2
Rated impulse voltage: 1500V
Automatic action: 6000 cycles

Temperature Probe (optional)

Type of temperature probe: R25°C=10KΩ±1%,
R0°C=26.74~27.83KΩ , B25/85°C=3435K±1%
Temperature measurement range:
-40°C~100°C/-40°F~212°F
Temperature display accuracy: 0.1°C/°F(<100°C/°F),
1°C/°F(>=100°C/°F)
Temperature measurement accuracy:

Range of Temperature Celsius	Celsius Error	Range of Temperature Fahrenheit	Fahrenheit Error
-40℃≤T<10℃	±2℃	-40℉≤T<50℉	±3℉
10℃≤T<80℃	±1℃	50℉≤T<176℉	±2℉
80℃≤T<100℃	±2℃	176℉≤T<212℉	±3℉

Ambient

Ambient temperature: Room temperature
Storage environment:
temperature: 0°C~60°C/32°F~140°F
humidity: 20~80%RH (Unfrozen or condensationstate)

Warranty

Controller: Two years warranty
Temperature Probe: One year warranty

03 Technical Assistance and Warranty

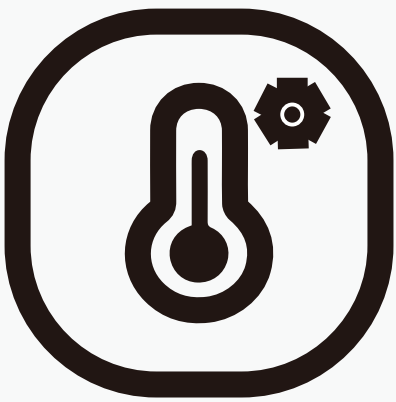
3.1 Technical Assistance

If you have any problems installing or using this controller, please refer to the instruction manual for guidance. If you require further assistance, please email us at **support@inkbird.com**. We will reply within 24 hours, Monday to Saturday. Alternatively, you can visit our official website (www.inkbird.com) to find answers to common technical questions.

3.2 Warranty

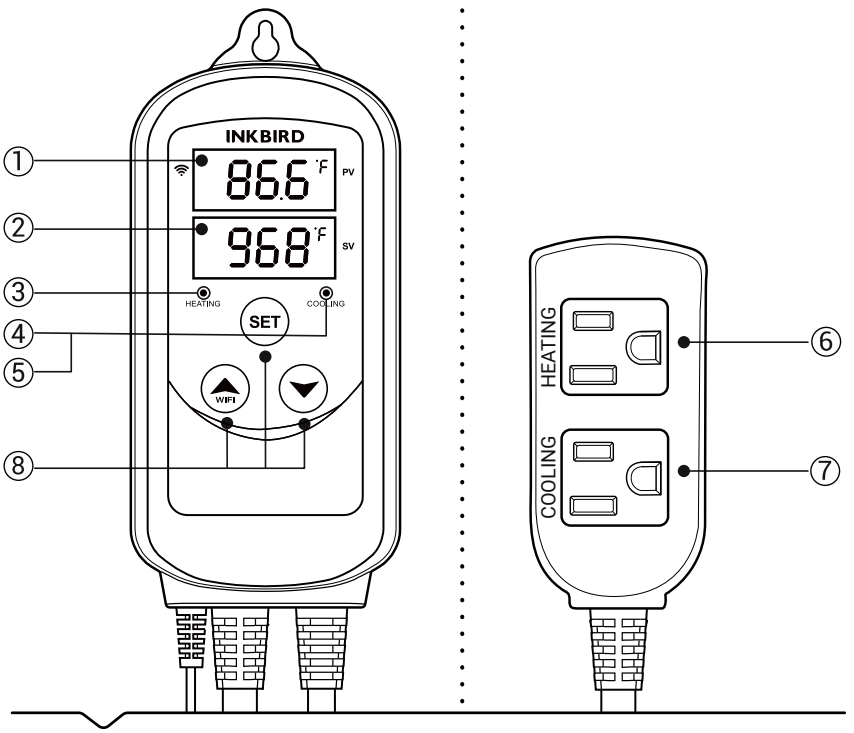
INKBIRD TECH CO., LTD warrants this controller (one year for the temperature probe) against defects caused by INKBIRD's workmanship or materials for two years (one year for the temperature probe) from the date of purchase, provided it is operated under normal conditions by the original purchaser (not transferable). This warranty is limited to the repair or replacement (at INKBIRD's discretion) of all or part of the controller.

Part 2



ITC-308 WIFI
TEMPERATURE
Controller Manual

01 Get to Know the Device



① **PV:** In normal mode, it displays current temperature; in settings mode, it displays menu code.

② **SV:** In normal mode, it displays the temperature setting value; in the setting mode, it displays the setting value.

③ **Red Light ON:** Heating output is on.

④ **Green Light ON:** Cooling output is on.

⑤ **Green Light Blinks:** The controller is performing the function of compressor delay.

⑥ **HEATING:** Heating output socket.

⑦ **COOLING:** Cooling output socket.

⑧ **Setting button(SET)**，**Increase button (WiFi)**，**Decrease button(⌄):** More details on Control Function Instructions.

02 INKBIRD APP Setting

2.1 Download the APP

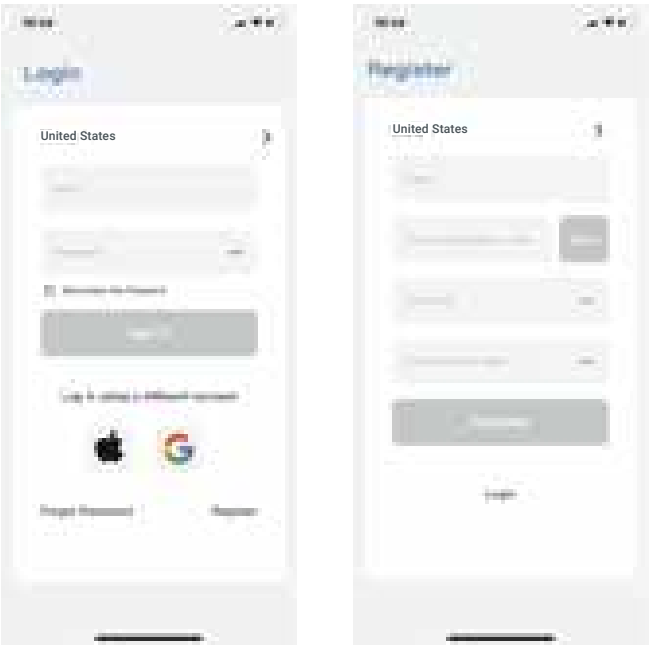
Search the keyword "**INKBIRD**" in Appstore or Google Play, or scan the following QR code to download and install the APP.

INKBIRD APP

2.2 Pair with your phone

① Open the app, it will ask you to register or log in your account on the APP. Select the country and enter your Mobile number or Email to finish the registration. Then press

“Add Home"button to create your home.



② Tap “+" or “add device" button in home page of the APP to add the device.

③ If the controller is in the normal working state, you can long press WIFI 2 seconds to reset the WIFI. It will enter the Smartconfig configuration state by default. You can short press WIFI to switch the Smartconfig configuration state and the AP mode. If you change the WIFI state, it will take about 5 seconds to display the corresponding LED symbol and state, because of the WIFI module data processing.

Add device in quick connection:

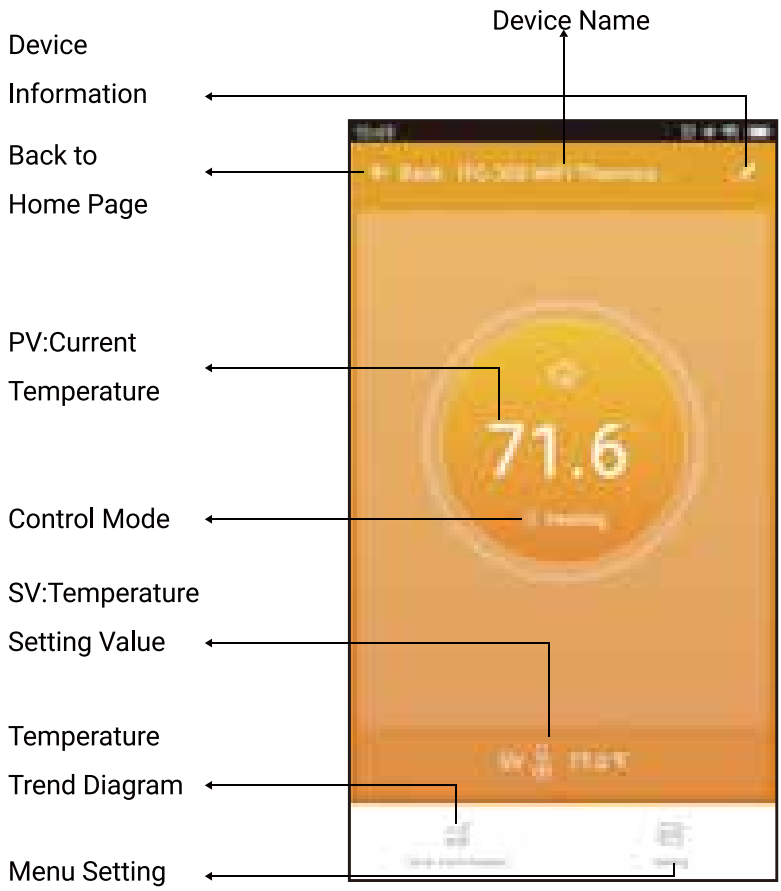
- Plug the device in the socket and make sure that the device is in the Smartconfig.
- configuration state (the LED symbol is flashing, interval flashing 250ms). Click “Confirm indicator rapidly blink" and then select Wi-Fi network, enter Wi-Fi password,click “confirm” to enter connection process.
- The device only supports 2.4GHz Wi-Fi router.

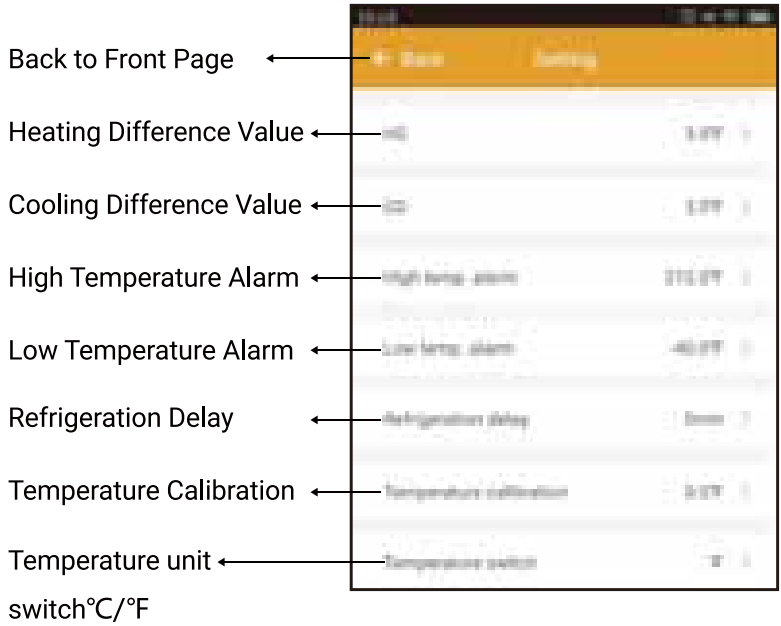
Add device in AP mode:

- Plug the device in the socket and make sure that the device is in the AP Configuration State (the LED symbol is flashing slowly, interval flashing 1500ms).
- Click “  ” to enter device adding interface,click “Confirm indicator slowly blink” and then select Wi-Fi network, enter Wi-Fi password,click “confirm” to enter connection process.
- Press “Connect now” and it will go to your WLAN Setting in your smart phone, select the “SmartLife-XXXX” to directly connect to the router without putting in password.
- Go back to app to enter into the automatic connection interface.

④ Click “Done” after adding device succeedfully and enter into device controlling interface .

⑤ In the temperature control mode, user can set control function via APP.


Device Name
Device
Information
Back to
Home Page
PV:Current
Temperature
71.6
Control Mode
SV:Temperature
Setting Value
Temperature
Trend Diagram
Menu Setting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Heating Difference Value
Cooling Difference Value
High Temperature Alarm
Low Temperature Alarm
Refrigeration Delay
Temperature Calibration
Temperature unit
switch℃/℉

03 Control Function Instructions

3.1 Button Operation Instructions

3.1.1 Button Function in Normal Operation Mode

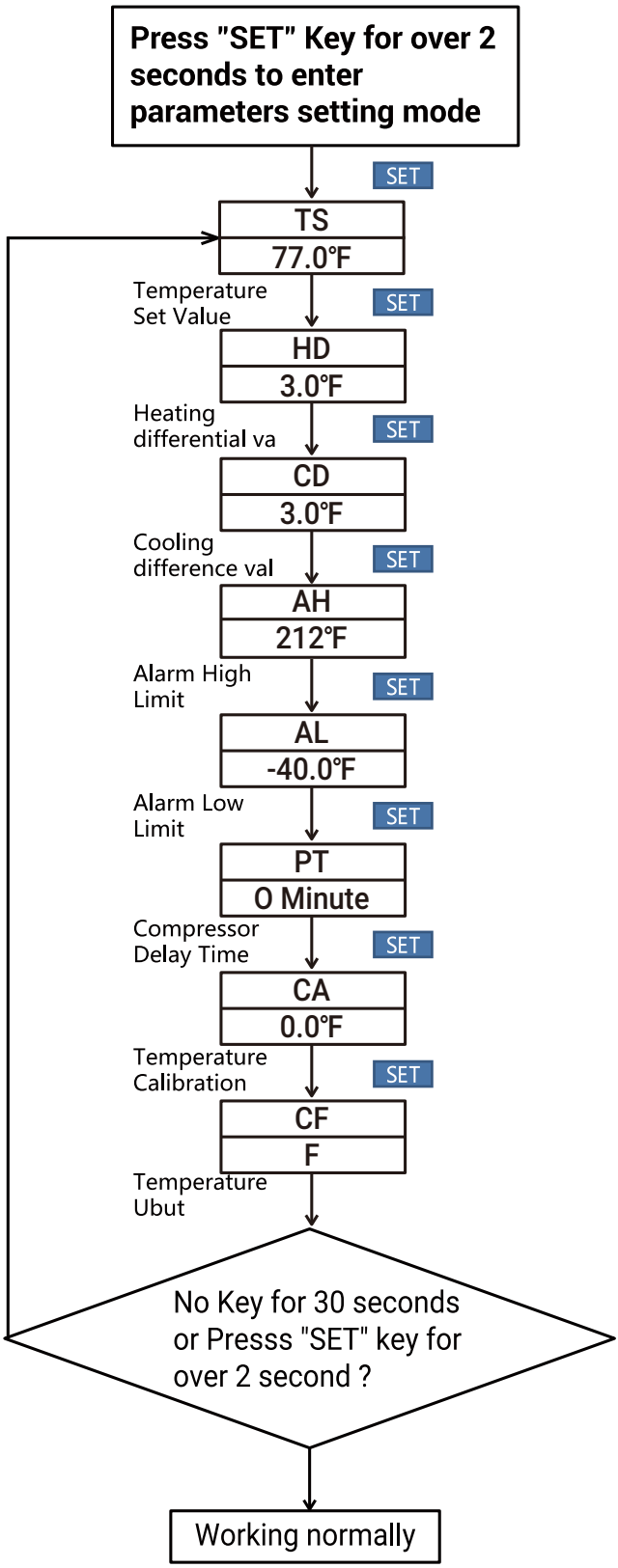
3.1.1.1 Quickly press "⌄", PV shows HD, SV shows heating difference value; Short Press "⌄" again, PV shows CD, cooling difference value. And It will be back to the normal display if there is no operation for 3 seconds or pressing the SET button.

3.1.1.2 Quickly press the SET button to enter the quick setting temperature setting value mode, at this time, SV displays the current control setting value and flashes. Quickly press "⌃WIFI" or "⌄" button to increase or decrease the setting value. Long press "⌃WIFI" or "⌄" button to quickly increase or decrease the setting value, then press SET button to confirm and exit. If there is no operation, it will automatically exit after 10 seconds and save the setting value.

3.1.2 Button Function in Setting Mode

When the controller is working normally, press the SET button for 2 seconds to enter the setting mode. The PV digital tube shows the first menu code“TS”, SV shows the corresponding setting value. Press SET button to scroll down the menu item and save the parameters of the previous menu item. Press "WIFI"or "▼"button to change the current setting value. **If in the setting state, there is no operation within 30 seconds or long press "SET" button for 2 seconds, it will exit and save the setting state and return to normal operation mode.**

3.2 Menu Setting Flow Chart



3.3 Setting Menu Instruction

Code	Symbol	Function	Setting Range	Default Settings	Annotation
TS	tS	Temperature Setting Value	-40.0°C~100°C -40.0°F~212°F	25.0°C 77.0°F	
HD	Hd	Heating Difference Value	0.3°C~15.0°C 1.0°F~30.0°F	2.0°C 3.0°F	More details on 6.4.1
CD	Cd	Cooling Difference Value	0.3°C~15.0°C 1.0°F~30.0°F	2.0°C 3.0°F	
AH	AH	Alarm High Temperature Limit	-40.0°C~100°C -40.0°F~212°F	100°C 212°F	More details on 6.4.2
AL	AL	Alarm High Temperature Limit	-40.0°C~100°C -40.0°F~212°F	-40.0°C -40.0°F	
PT	Pt	Compressor Delay Time	0~10 minutes	minute	More details on 6.4.3
CA	CA	Temperature Calibration	-9.9°C~9.9°C -15.0°F~15.0°F	0.0°C 0.0°F	More details on 6.4.4
CF	CF	Fahrenheit or Celsius Settings	C or F	F	More details on 6.4.5

3.4 Control Function Instruction

When the controller works normally, PV screen shows the measured temperature, meantime the SV screen shows the set temperature. It recognizes and converts from heating to cooling mode automatically. HEATING socket for heating output, the red LED indicator showing heating status. While COOLING socket for cooling output, the green LED indicator showing cooling status.

3.4.1 Instructions for Setting Temperature Control (TS, HD, CD)

3.4.1.1 Normal Temperature Control

When the measured temperature PV ≤ TS (Temperature Setting Value) – HD (Heating difference value),the controller will enter the heating state, the red led is on, HEATING output works. When the measured temperature PV ≥ TS(Temperature Settin Value), the red led is off and the HEATING output turns off. When the measured temperature PV ≥ TS(Temperature Setting Value) + CD(Cooling difference value), the controller will enter the cooling state, the green led is on, COOLING output works; the green led flashes, indicating that the cooling device is in the state of the Compressor delay protection. When PV(measured temperature) ≤ TS(temperature setting value), the green led is off and the COOING output turns off. For example, setting TS= 25.0°C, CD=2.0°C, HD=3.0°C, when the measured temperature value ≤ 22°C (TS-HD), the controller will enter the state; when the measured temperature value ≥ 25°C, the heating will stop; when the

measured temperature value 27.0°C(TS+CD), the controller enter the cooling state; when measured temperature value ≤25.0°C, cooling will stop.

3.4.1.2 Special Temperature Control

If there is no need to judge the return difference in heating or cooling when power on or exiting the setting state, then it directly compare with TS. For example: When power on or exiting the setting state, TS=25.0°C, CD=2.0°C, HD=3.0°C. If PV (measured temperature value) >25.0°C, it enters the cooling state. When PV(measured temperature value) ≤25.0°C, the cooling stops. Then return to normal temperature control. When PV(measured temperature value) <25.0 °C, it enter the heating state, when PV(measured temperature value) ≥ 25.0 °C, heating stops, and then return to normal temperature control.

3.4.2 Alarm High / Low Temperature Limit Settings (AH, AL)

When measured temperature ≥AH (high temperature limit alarm), then AH flashes alternately with the current temperature, meantime buzzer will“bi-bi-Biii”alarm, until the temperature <AH, buzzer off and return to normal display and control. Or press any button to turn the buzzer alarm off only . When measured temperature ≤ AL (low temperature alarm), then AL flashes alternately with the current temperature, meantime buzzer will “bi-bi-Biii”alarm, until the temperature >AL, buzzer off and return to normal display and control. Or press any button to turn the buzzer alarm off only. High and low temperature limit alarm will be pushed to mobile APP and remind the customer that the product is in alarm state.

3.4.3 Compressor Delay Time(PT)

In the cooling mode, when the power is turned on for the first time, PV(measured temperature value) ≥ TS(Tempera-

ture setting value) + CD(Cooling difference value), it will not start cooling immediately, but waiting for a delay time(PT). When two adjacent of cooling starting intervals are greater than the delay time, it will immediately start cooling; When two adjacent of cooling starting intervals are less than the delay time, it needs to operate the remaining delay time to start the cooling.
Delay time will start counting from the cooling output off.

3.4.4 Temperature Calibration(CA)

When the measured temperature deviates from the standard temperature, the temperature calibration function can be used to make the measured value of the instrument consistent with the standard value. The calibrated temperature = the measured temperature + the calibration value.

3.4.5 Fahrenheit or Celsius Settings (CF)

User can set the display unit to Fahrenheit

or Celsius according to their habits. The default temperature is Fahrenheit. If you need to display the unit in Celsius, then set the CF to C. Please note that when the CF changes state, all setting values are restored to the default setting and the buzzer gives a short beeping prompt.

04 Exception Handling

4.1 When the temperature sensor circuit is short-circuited or open-circuit fault, the controller starts the probe fault mode, it will close all execution states, the buzzer sounds and the digital tube displays ER, then press any button to eliminate the buzzer sound, after the fault is removed, it will return to the normal working mode.

4.2 When the controller is powered off or in the state of disconnected, the mobile APP will still show online state, and the disconnected state will be showed after 1 to 3 minutes.

05 FCC Requirement

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio

communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
– Reorient or relocate the receiving antenna.
– Increase the separation between the equipment and receiver.
– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
– Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator & your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

06 IC Warning

This device contains licence-exempt transmitter(s)/ receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s).
Operation is subject to the following two conditions:
(1)This device may not cause interference.
(2)This device must accept any interference, including interference that may cause undesired operation of the device.
The device meets the exemption from the routine evaluation limits in section 2.5 of RSS 102 andcompliance with RSS-102 RF exposure, users can obtain Canadian information on RF exposure and compliance.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence.
L'exploitation est autorisée aux deux conditions suivantes :
(1)L'appareil ne doit pas produire de brouillage;
(2)L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Le dispositif rencontre l'exemption des limites courantes d'évaluation dans la section 2.5 de RSS 102 etla conformité à l'exposition de RSS-102 rf, utilisateurs peut obtenir l'information canadienne surl'exposition et la conformité de rf.

Cet émetteur ne doit pas être Co-placé ou ne fonctionnant en même temps qu'aucune autre antenne ouémetteur.

Cet équipement devrait être installé et actionné avec une distance minimum de 20 centimètres entre le radiateur et votre corps.

07 Troubleshooting Guide

Issues	Causes	Solutions
Can not connect to WIFI.	1. Incorrect phone settings. 2. Incorrect router settings. 3. Incorrect connection mode selection. 4. Device malfunc-tion.	1. In the phone settings, all permissions for the INKBIRD app are turned on. The Bluetooth and location functions of the phone are turned on. 2. Please ensure that the router can transmit 2.4GHz wifi signal alone, and the mobile phone remains connected to the 2.4GHz wifi that can access the Internet. Please make sure the SSID of the 2.4GHz wifi is not hidden. The password is not empty. There is no limit on the number of connected devices to the router. If you are not sure whether the upper limit has been reached, please turn off 2-3 WIFI devices. Router settings are as follows: ·Wireless protocol: 802.11 b/g/n, but cannot be set to 11n only; ·Security mode: WPA/WPA2 ·Authentication type: AES ·Enable DHCP service ·No VPN service. 3. Select the correct WiFi mode in the app. If there are many WiFi products interfering nearby, please switch the device to slow flash (AP) mode to connect. If it still does not work, please contact customer service.

Issues	Causes	Solutions
The probe reading is incorrect.	1.The probe is placed in a area with poor tempera-ture circulation. 2.The probe is damaged.	1. Adjust the position of the probe. 2. If the probe was used in liquids, dry it using a hairdryer and then test it at room temperature. 3. Check if the probe is intact. 4. If the deviation is small, use the CA (calibration) function to calibrate.
Heating output will not turn on.	1. Incorrect settings. 2.Incom-patible heater. 3. Output malfunc-tion.	1. Verify that the settings are correct. 2. The heater power is within the range of 100-240V, 10A. The heater can automatically turn on when plugged in. The heater does not have a built-in temperature control, or the built-in temperature control does not affect the ITC-308-WIFI control. 3. There is no problem with 1&2, please: · Unplug the controller. · Press and hold the “SET” button. · Plug the controller to power on, then release the “SET” button · Quickly press the “ WIFI ” button (do not press the “ ” button). The “HEATING” indicator and output should activate. If the heater still does not work, please contact customer service.

Issues	Causes	Solutions
Cooling output will not turn on.	1. Incorrect settings. 2. Incompatible cooler. 3. Output malfunction.	1. Verify that the settings are correct. 2. The cooler power is within the range of 100-240V, 10A. The cooler can automatically turn on after power is connected. The cooler does not have a built-in temperature control, or the built-in temperature control does not affect the ITC-308-WIFI control. 3. There is no problem with 1&2, please: · Unplug the controller. · Press and hold the “SET” button. · Plug the controller to power on, then release the “SET” button · Quickly press the “ ⌄ ” button (do not press the “ ^ WIFI ” button). The 'cooling' indicator and output should activate. If the cooler still does not work, please contact customer service.

Issues	Causes	Solutions
Heating output will not turn off.	1. Incorrect settings. 2. Heater power exceeds limit. 3. Output malfunc-tion.	1. Verify that the settings are correct. 2. The heater power is within the range of 100-240V, 10A. 3. There is no problem with 1&2, please: ·Unplug the controller. ·Press and hold the “SET” button. ·Plug the controller to power on, then release the “SET” button · Quickly press the “ ” button (do not press the “ WIFI ” button). The “COOLING” indicator and output should activate. If the heater still does not off, please contact customer service.
Cooling output will not turn off.	1. Incorrect settings. 2. Cooler power exceeds limit. 3. Output malfunc-tion.	1. Verify that the settings are correct. 2. The cooler power is within the range of 100-240V, 10A. 3. There is no problem with 1&2, please: ·Unplug the controller. ·Press and hold the “SET” button. ·Plug the controller to power on, then release the “SET” button · Quickly press the “ WIFI ” button (do not press the “ ” button). The 'heating' indicator and output should activate. If the cooler still does not off, please contact customer service.

Issues	Causes	Solutions
App cannot save settings.	1. Device offline 2. Network unstable 3. Operation error	1. Install the controller as close to the router as possible. If it is still offline, please delete the offline device and reconnect. 2. Ensure the network and wifi are stable. 3. After the settings are completed, please exit and save the settings using the “<”(back) button of the app. Please do not use the back button of the phone itself to exit.

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Factory Address: Room 501, Building 138, No. 71, Yiqing Road, Xianhu Community, Liantang Street, Luohu District, Shenzhen, China

V1.0

MADE IN CHINA
DESIGNED BY INKBIRD